

IN THE CLAIMS:

Please cancel Claims 2, 5, 8 and 11 without prejudice or disclaimer of the subject matter recited therein.

Please amend Claims 1 and 7 and add new Claims 20 and 21 as follows.

1. (Currently Amended) An image forming apparatus including a plurality of electron-emitting devices arranged in a matrix of rows and columns, and fluorescent substances for emitting light by electrons emitted by the electron-emitting devices, further comprising:

frame rate conversion means for converting a frame rate of an input image signal,

wherein a ~~signal output from~~ said frame rate conversion means converts the frame rate of the input image signal so that a luminance characteristic of the fluorescent substances depending on an electron irradiation time for the fluorescent substances substantially has a linearity ~~is a signal having a maximum time interval during which the fluorescent substances are continuously irradiated with electrons from the electron-emitting devices in units of rows in line-sequential scanning, so as not to substantially degrade linearity of a luminance characteristic of the fluorescent substances that changes depending on an electron irradiation time for the fluorescent substances.~~

Claim 2. (Cancelled).

3. (Original) The image forming apparatus according to claim 1, wherein the frame rate is converted simultaneously when a signal for an interlaced scanning is converted into a signal for a non-interlaced scanning.

4. (Original) The image forming apparatus according to claim 1, further comprising means for performing pulse width modulation by the signal whose frame rate is converted.

Claim 5. (Cancelled).

6. (Original) The image forming apparatus according to claim 1, wherein the frame rate is converted to shorten the maximum time interval during which the fluorescent substances are continuously irradiated with electrons from the electron-emitting devices in units of rows in line-sequential scanning, compared to a case in which the frame rate is not converted.

7. (Currently Amended) An image forming apparatus having a plurality of electron-emitting devices arranged in a matrix of rows and columns, and fluorescent substances for emitting light by electrons emitted by the electron-emitting devices, further comprising:

signal processing means for converting a signal for an interlaced scanning into a signal for a non-interlaced scanning,

wherein said signal processing means converts ~~an input~~ the signal so that a luminance characteristic of the fluorescent substances depending on an electron irradiation

~~time for the fluorescent substances substantially has a linearity into a signal having a maximum time interval during which the fluorescent substances are continuously irradiated with electrons from the electron-emitting devices in units of rows in line-sequential scanning, so as not to substantially degrade linearity of a luminance characteristic of the fluorescent substances that changes depending on an electron irradiation time for the fluorescent substances.~~

Claim 8. (Cancelled).

9. (Original) The image forming apparatus according to claim 7, wherein the signal processing is performed simultaneously when a signal for an interlaced scanning is converted into a signal for a non-interlaced scanning signal.

10. (Original) The image forming apparatus according to claim 7, further comprising means for performing pulse width modulation by the processed signal.

Claim 11. (Cancelled).

12. (Original) The image forming apparatus according to claim 1, wherein the electron-emitting devices are surface-conduction type electron-emitting devices.

13. (Original) The image forming apparatus according to claim 7, wherein the electron-emitting devices are surface-conduction type electron-emitting devices.

14. (Original) The image forming apparatus according to claim 1, further comprising an electrode to which a potential for accelerating electrons emitted by the electron-emitting devices applies, wherein the potential is higher by not less than 500 V than a potential applied to the electron-emitting devices in order to emit electrons.

15. (Original) The image forming apparatus according to claim 7, further comprising an electrode to which a potential for accelerating electrons emitted by the electron-emitting devices applies, wherein the potential is higher by not less than 500 V than a potential applied to the electron-emitting devices in order to emit electrons.

16. (Original) The image forming apparatus according to claim 1, further comprising an electrode to which a potential for accelerating electrons emitted by the electron-emitting devices applies, wherein the potential is higher by not less than 3 kV than a potential applied to the electron-emitting devices in order to emit electrons.

17. (Original) The image forming apparatus according to claim 7, further comprising an electrode to which a potential for accelerating electrons emitted by the electron-emitting devices applies, wherein the potential is higher by not less than 3 kV than a potential applied to the electron-emitting devices in order to emit electrons.

18. (Original) The image forming apparatus according to claim 1, further comprising an electrode to which a potential for accelerating electrons emitted by the electron-

emitting devices applies, wherein the potential is higher by not less than 5 kV than a potential applied to the electron-emitting devices in order to emit electrons.

19. (Original) The image forming apparatus according to claim 7, further comprising an electrode to which a potential for accelerating electrons emitted by the electron-emitting devices applies, wherein the potential is higher by not less than 5 kV than a potential applied to the electron-emitting devices in order to emit electrons.

20. (New) The image forming apparatus according to claim 1, wherein the plurality of electron emitting devices and the fluorescent substances are arranged apart from each other.

21. (New) The image forming apparatus according to claim 7, wherein the plurality of electron emitting devices and the fluorescent substances are arranged apart from each other.